

This listing of claims will replace all prior versions, and listings, of claims in the application:

1 Claim 1 (currently amended): A method of providing
2 search results in response to an ambiguous search query,
3 the ambiguous search query consisting of a sequence of
4 ambiguous information components:
5 receiving a sequence of ambiguous information
6 components from a user;
7 obtaining mapping information that maps the
8 ambiguous information components to less ambiguous
9 information components;
10 using the mapping information to translate the
11 sequence of ambiguous information components into ~~one or~~
12 ~~more~~ at least two corresponding sequences of less
13 ambiguous information components;
14 providing ~~one or more of the~~ at least two sequences
15 of less ambiguous information, each of the sequences
16 effectively being joined by a logical "OR" operation
17 request, as an input to a search engine;
18 obtaining search results from the search engine; and
19 presenting the search results to the user.

1 Claim 2 (original): The method of claim 1, wherein the
2 mapping information is based on the configuration of a
3 standard telephone keypad.

1 Claim 3 (currently amended): The method of claim 1 ~~2~~,
2 wherein the ambiguous information components comprise
3 numbers and the less ambiguous information components
4 comprise letters.

1 Claim 4 (original): The method of claim 1, wherein each
2 of the ambiguous information components comprise a single
3 press of a key and the less ambiguous information
4 comprises letters that correspond to the key.

1 Claim 5 (original): The method of claim 1, wherein the
2 ambiguous information components comprise phonemes.

1 Claim 6 (original): The method of claim 5, wherein the
2 less ambiguous information components comprise
3 alphanumeric information.

1 Claim 7 (original): The method of claim 1, wherein the
2 ambiguous information components comprise visual
3 information.

1 Claim 8 (original): The method of claim 1, wherein the
2 act of using comprises using the mapping information in
3 combination with a lexicon to translate the sequence of
4 ambiguous information components into one or more
5 corresponding sequences of less ambiguous information
6 components.

1 Claim 9 (original): The method of claim 8, wherein the
2 lexicon is a dictionary.

1 Claim 10 (currently amended): The method of claim 8,
2 wherein the lexicon is a list of sequences of less
3 ambiguous information components that previously have
4 been processed by the search engine as search queries.

Claim 11 (canceled)

1 Claim 12 (currently amended): The method of claim 11,
2 wherein the act of providing comprises:
3 determining a subset of the translated sequences of
4 less ambiguous information components; and
5 providing the subset of translated sequences of less
6 ambiguous information components as an input to a search
7 engine.

1 Claim 13 (original): The method of claim 12, wherein the
2 act of determining comprises comparing the translated
3 sequences of less ambiguous information components
4 against a lexicon.

1 Claim 14 (currently amended): A method of providing
2 search results in response to an ambiguous search query,
3 the ambiguous search query consisting of a sequence of
4 ambiguous information components:
5 receiving a sequence of ambiguous information
6 components from a user;
7 obtaining mapping information that maps the
8 ambiguous information components to less ambiguous
9 information components;
10 using the mapping information to translate the
11 sequence of ambiguous information components into a
12 plurality of corresponding sequences of less ambiguous
13 information components;
14 determining a subset of the plurality of sequences
15 of less ambiguous information components by ~~The method of~~
16 ~~claim 12, wherein the act of determining comprises~~
17 comparing the translated plurality of sequences of less

18 ambiguous information components ~~against~~ with terms used
19 in past search queries stored in a search query log;
20 providing the subset of sequences of less ambiguous
21 information components as an input to a search engine;
22 obtaining search results from the search engine; and
23 presenting the search results to the user.

1 Claim 15 (original): The method of claim 12, wherein the
2 act of determining comprises using statistical
3 information about the co-occurrence of the less ambiguous
4 information components within the sequence.

1 Claim 16 (currently amended): A method of providing
2 search results in response to an ambiguous search query,
3 comprising:
4 receiving a sequence of information components from
5 a user, each information component corresponding to a key
6 press;
7 obtaining mapping information that maps each of the
8 key press information components to a plurality of other
9 information components, each corresponding to the same
10 key press;
11 using the mapping information to determine, from the
12 sequence of key press information components, other
13 sequences of information components by converting each
14 key press information component to each of the other
15 information components that correspond to the key press
16 component;
17 providing one or more of the received sequence and
18 the other sequences as ~~an~~ a search query input to a
19 search engine;
20 obtaining search results from the search engine; and

21 presenting the search results to the user.

1 Claim 17 (original): The method of claim 16, wherein the
2 mapping information is based on the configuration of a
3 standard telephone keypad.

1 Claim 18 (original): The method of claim 17, wherein the
2 received information components comprise numbers and the
3 other information components comprise letters.

1 Claim 19 (original): The method of claim 17, wherein
2 both the received and other information components
3 comprise letters.

1 Claim 20 (original): The method of claim 16, wherein the
2 act of providing comprises providing at least two
3 sequences to the search engine using a logical "OR"
4 operations.

Claims 21-25 (canceled)

1 Claim 26 (currently amended): A method of providing
2 search results to a user in response to an ambiguous
3 search query, comprising:
4 receiving at least two number words constituting a
5 number phrase;
6 translating each number word into one or more letter
7 words, based on mapping information, to generate a
8 plurality of letter phrases, each of the letter phrases
9 corresponding to the number phrase;

10 forming ~~one or more letter phrases~~ as a search query
11 to a search engine wherein the search query includes at
12 least one of the letter phrases;
13 obtaining search results from the search engine in
14 response to the search query; and
15 providing the search results to a user.

1 Claim 27 (currently amended): The method of claim 26,
2 wherein the providing step comprises providing at least
3 two of the letter phrases, each of the letter phrases
4 being effectively joined by a logical "OR" operation
5 request, as a search query to a search engine ~~using a~~
6 ~~logical "OR" operation~~.

1 Claim 28 (original): The method of claim 26, wherein the
2 mapping information is based on a standard telephone
3 keypad.

Claim 29 (canceled)

1 Claim 30 (currently amended): A computer-readable medium
2 containing one or more instructions for providing search
3 results in response to an ambiguous search query, the
4 ambiguous search query consisting of a sequence of
5 ambiguous information components, the instructions
6 comprising:
7 receiving a sequence of ambiguous information
8 components from a user;
9 obtaining mapping information that maps the
10 ambiguous information components to less ambiguous
11 information components;

12 using the mapping information to translate the
13 sequence of ambiguous information components into ~~one or~~
14 ~~more~~ at least two corresponding sequences of less
15 ambiguous information components;
16 providing ~~one or more of~~ the at least two sequences
17 of less ambiguous information, each of the sequences
18 effectively being joined by a logical "OR" operation
19 request, as an input to a search engine;
20 obtaining search results from the search engine; and
21 presenting the search results to the user.

1 Claim 31 (currently amended): An apparatus for providing
2 search results in response to an ambiguous search query,
3 the ambiguous search query consisting of a sequence of
4 ambiguous information components, comprising:
5 at least one memory having program instructions; and
6 at least one processor configured to execute the
7 program instructions to perform the operations of:
8 receiving a sequence of ambiguous information
9 components from a user;
10 obtaining mapping information that maps the
11 ambiguous information components to less ambiguous
12 information components;
13 using the mapping information to translate the
14 sequence of ambiguous information components into ~~one or~~
15 ~~more~~ at least two corresponding sequences of less
16 ambiguous information components;
17 providing ~~one or more of~~ the at least two sequences
18 of less ambiguous information, each of the sequences
19 effectively being joined by a logical "OR" operation
20 request, as an input to a search engine;

21 obtaining search results from the search
22 engine; and
23 presenting the search results to the user.

1 Claim 32 (currently amended): An apparatus for providing
2 search results in response to an ambiguous search query,
3 the ambiguous search query consisting of a sequence of
4 ambiguous information components, comprising:
5 means for receiving a sequence of ambiguous
6 information components from a user;
7 means for obtaining mapping information that maps
8 the ambiguous information components to less ambiguous
9 information components;
10 means for using the mapping information to translate
11 the sequence of ambiguous information components into ~~one~~
12 ~~or more~~ at least two corresponding sequences of less
13 ambiguous information components;
14 means for providing ~~one or more of the~~ at least two
15 sequences of less ambiguous information, each of the
16 sequences effectively being joined by a logical "OR"
17 operation request, as an input to a search engine;
18 means for obtaining search results from the search
19 engine; and
20 means for presenting the search results to the user.

1 Claim 33 (previously presented): The method of claim 1
2 wherein the act of using the mapping information to
3 translate the sequence of ambiguous information
4 components into one or more corresponding sequences of
5 less ambiguous information components uses the mapping
6 information to directly translate the sequence of
7 ambiguous information components into one or more

8 corresponding sequences of less ambiguous information
9 components.

1 Claim 34 (previously presented): The method of claim 1
2 wherein the ambiguous information components are more
3 ambiguous than the less ambiguous information components
4 due to a limited capability of a user input device.

1 Claim 35 (previously presented): The method of claim 1
2 further comprising looking up search results using an
3 index including entries, at least one entry including a
4 sequence of less ambiguous information components mapped
5 to a set of one or more items.

1 Claim 36 (new): The method of claim 26 wherein the
2 search results provided to the user have been ranked such
3 that search results corresponding to documents that
4 include at least one of the exact letter phrases are
5 provided higher than search results corresponding to
6 documents that do not include any of the exact letter
7 phrases.

1 Claim 37 (new): The method of claim 26 wherein the
2 search results exclude search results corresponding to
3 documents that include do not include any of the exact
4 letter phrases.

1 Claim 38 (new): A method of providing search results in
2 response to an ambiguous search query, the ambiguous
3 search query consisting of a sequence of ambiguous
4 information components:

5 receiving a sequence of ambiguous information
6 components from a user associated with a language;
7 obtaining mapping information that maps the
8 ambiguous information components to less ambiguous
9 information components;
10 using the mapping information to translate the
11 sequence of ambiguous information components into one or
12 more corresponding sequences of less ambiguous
13 information components;
14 providing one or more of the sequences of less
15 ambiguous information as an input to a search engine;
16 obtaining search results from the search engine;
17 reordering the obtained search results using the
18 language of the user; and
19 presenting the reordered search results to the user.